

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1-2. (Cancelled)

3. (Previously Presented) The liquid drop discharge device according to Claim 25,

wherein the light beams drive the liquid drops by light pressure generated by the light energy.

4. (Previously Presented) The liquid drop discharge device according to Claim 25,

wherein the light beams drive the liquid drops by kinetic energy of molecules generated when atmosphere around the predetermined trajectories absorbs the light energy.

5. (Previously Presented) The liquid drop discharge device according to Claim 25,

wherein the liquid drops contain a photothermal converting material for absorbing and converting the light energy into heat.

6-16. (Cancelled)

17. (Previously Presented) A printing device comprising the liquid drop discharge device according to Claim 25,

wherein the liquid drop discharge device is used to carry out printing.

18-24. (Cancelled)

25. (Previously Presented) A liquid drop discharge device, comprising:

a substrate;

a plurality of discharge heads supported above the substrate, each of the discharge heads having a nozzle and selectively discharging liquid drops through the nozzle to the substrate, the liquid drops from each of the discharge heads having a predetermined trajectory from the nozzles to the substrate; and

a plurality of laser devices each supported proximate one of the discharge heads, each of the laser devices having a plurality of lenses surrounding the nozzle of one of the discharge heads, each of the laser devices emitting a plurality of light beams surrounding the predetermined trajectory of liquid drops from one of the discharge heads, the light beams providing light energy to the liquid drops when the liquid drops divert from the predetermined trajectories.

26. (Previously Presented) A liquid drop discharge device, comprising:

a stage;

a substrate supported on the stage, the stage and the substrate being capable of transmitting light;

a discharge head disposed so as to face the substrate, the discharge head selectively discharging liquid drops to the substrate, the liquid drops having a predetermined trajectory from the discharge head to the substrate; and

a head unit disposed so as to face the stage opposite the discharge head, the head unit including a laser device emitting a plurality of light beams through the stage and the substrate, the light beams spaced apart from and surrounding the predetermined trajectory of the liquid drops and extending in the same direction as the liquid droplets discharged from the discharge head, the light beams providing light energy to the liquid drops when the liquid drops divert from the predetermined trajectory, the head unit further including a collimator and a diffracting element disposed between the laser device and the stage so that the light beams pass therethrough.

27. (Previously Presented) The liquid drop discharge device according to Claim 25, wherein the plurality of light beams are spaced apart from the predetermined trajectory of the liquid drops.

28. (Previously Presented) The liquid drop discharge device according to Claim 25, wherein the plurality of light beams extend from the one of the discharge heads in the same direction as the liquid drops discharged from the one discharge head.

29. (Previously Presented) The liquid drop discharge device according to Claim 25, wherein the plurality of light beams axially surround the one of the discharge heads and the predetermined trajectory.

30. (Previously Presented) The liquid drop discharge device according to Claim 26, wherein the plurality of light beams axially surround the discharge head and the predetermined trajectory.

31. (New) The liquid drop discharge device according to Claim 25, wherein the plurality of light beams cooperate to form a hollow laser beam.

32. (New) The liquid drop discharge device according to Claim 31, wherein said predetermined trajectory extends through the hollow laser beam without contacting any of the plurality of light beams.

33. (New) The liquid drop discharge device according to Claim 32, wherein the hollow laser beam directs liquid drops that divert from the predetermined trajectory back towards a hollow portion of the hollow laser beam and toward the predetermined trajectory.

34. (New) The liquid drop discharge device according to Claim 26, wherein the plurality of light beams cooperate to form a hollow laser beam.

35. (New) The liquid drop discharge device according to Claim 34, wherein said predetermined trajectory extends through the hollow laser beam without contacting any of the plurality of light beams.

36. (New) The liquid drop discharge device according to Claim 35, wherein the hollow laser beam directs liquid drops that divert from the predetermined trajectory back towards a hollow portion of the hollow laser beam and toward the predetermined trajectory.